Naval Center for Cost Analysis (NCCA)

Automated Information Systems (AIS)/ Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C^{4}ISR) Branch (NCCA-4)

www.ncca.navy.mil

Agenda

- **Purpose of Brief**

- **Organization**

- **NCCA-4 Overview**

- **Cost Process for Milestone (MS) and Full-Rate Production Decision (FRPD) Reviews**
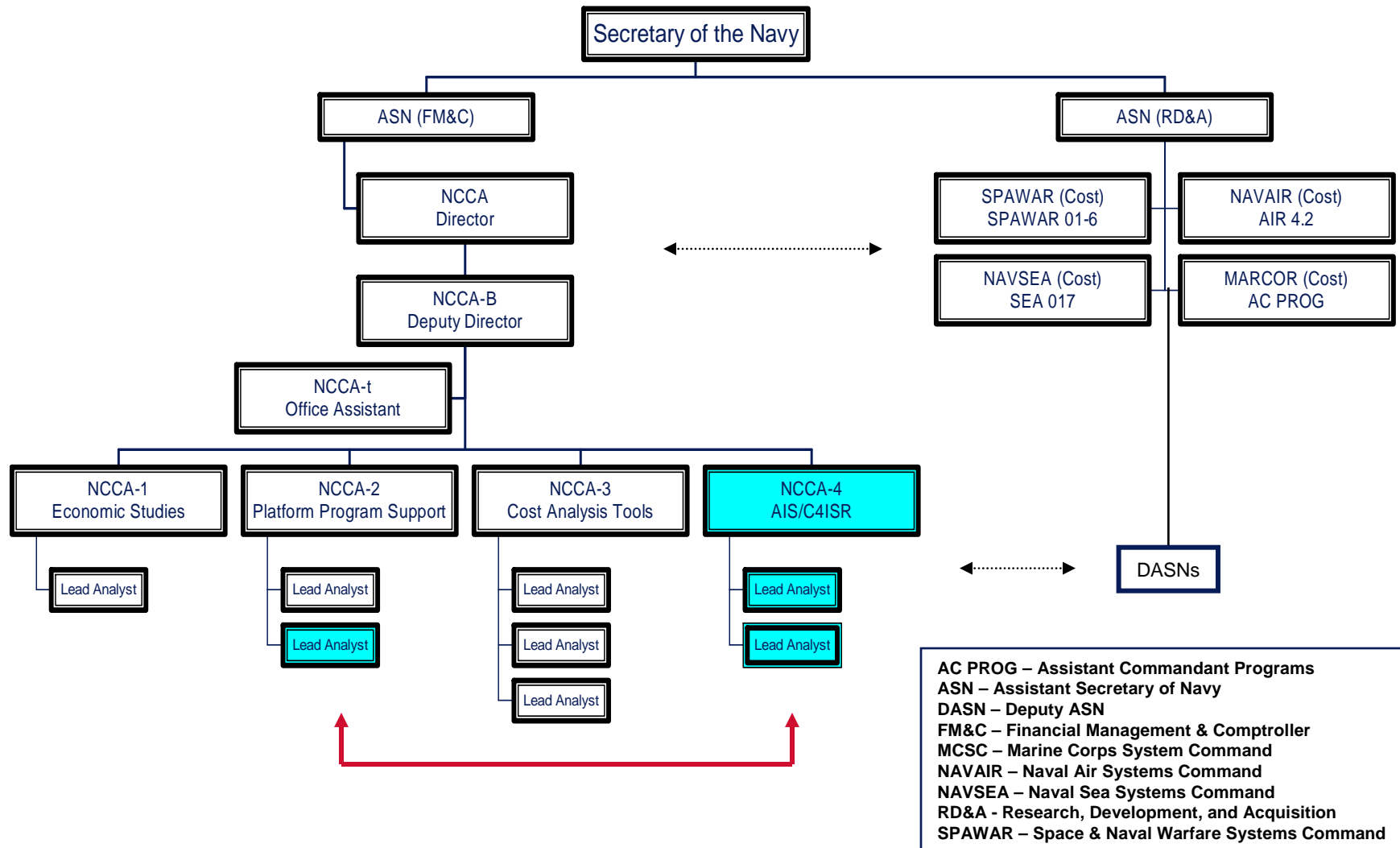
- **NCCA-4 Road Ahead**

Purpose of Brief

Provide overview of the *personnel*, *roles, responsibilities, processes*, and *products* of NCCA-4, the AIS/C⁴ISR Branch of NCCA

Organization
Current

Organization chart:

- Secretary of the Navy
  - ASN (FM&C)
    - NCCA Director
      - NCCA-B Deputy Director
        - NCCA-t Office Assistant
          - NCCA-1 Economic Studies
            - Lead Analyst
          - NCCA-2 Platform Program Support
            - Lead Analyst
            - Lead Analyst
          - NCCA-3 Cost Analysis Tools
            - Lead Analyst
            - Lead Analyst
            - Lead Analyst
          - NCCA-4 AIS/C4ISR
            - Lead Analyst
            - Lead Analyst
  - ASN (RD&A)
    - SPAWAR (Cost) SPAWAR 01-6
    - NAVAIR (Cost) AIR 4.2
    - NAVSEA (Cost) SEA 017
    - MARCOR (Cost) AC PROG
    - DASNs

AC PROG – Assistant Commandant Programs
ASN – Assistant Secretary of Navy
DASN – Deputy ASN
FM&C – Financial Management & Comptroller
MCSC – Marine Corps System Command
NAVAIR – Naval Air Systems Command
NAVSEA – Naval Sea Systems Command
RD&A - Research, Development, and Acquisition
SPAWAR – Space & Naval Warfare Systems Command

NCCA-4 Overview
Resources

- **NCCA-4 In-House Personnel:**
  - **All are 1515 Series - Operations Research (OR) Analysts**
  - **Lead Analysts can have workload from different branches**
  - **Backgrounds:**
    - Education: Bachelors' and Masters' Degrees
      Engineering, Math, and OR
    - Experience: Active-duty Navy, shipyard, System Command cost estimating, commercial cost estimating, and OPNAV

- **AIS Contractor Support*:**
  - **Government Agencies**
    - Naval Surface Warfare Center-Carderock   } Current
    - Software (SW) Technology Support Center, USAF
  - **Federally Funded Research & Development Centers**
  - **Private Firms**

* Funded by program office per ASN (FM&C) direction on 23 Dec 02

NCCA-4 Overview
Focus

- **NCCA-4 focuses on**
  - **Component Cost Analyses (CCAs)**
    - **Department of the Navy (DON) Acquisition Category (ACAT) IAC or DON-led ACAT IAM programs**
    - **MS A, B, and FRPD Reviews**
  - **Independent Cost Estimates (ICEs)**
    - **DON ACAT IC C^{4}ISR programs**
    - **MS B, C, and FRPD reviews**

- **CCAs/ICEs satisfy DoDI 5000.2 CCA/ICE requirements**
    - **Can be Sufficiency Review (SR) - independent cost analysis of high risk elements**

NCCA-4 Overview
Other Program Support/Special Studies

- **NCCA-4 may also:**
  - **Serve on Joint (non-DON led) ACAT IA and DON ACAT ID programs' Cost Integrated Product Teams (CIPTs) *as an advisor* (i.e., no formal cost products)**
  - **Conduct ICEs on ACAT II, III, or IV programs only if specifically directed by ASN (FM&C) or requested by ASN (RD&A)**
  - **Conduct cost research, special studies, and database efforts**
  - **Perform other efforts as directed by ASN (FM&C)**

NCCA-4 Overview
Philosophy

- **Typical program assignment includes:**
    - NCCA Lead Analyst who manages effort
    - Contractor support analysts who conduct hands-on analyses
    - NCCA Branch Head who provides oversight
- **Each NCCA Lead Analyst typically is supporting 2-3 programs simultaneously (includes CIPT memberships).**
- **NCCA analysts execute program estimating efforts as well as special requests and projects (as resources allow).**
- **Emphasis is on continuous training (on-the-job and formal).**
- **Emphasis is on data and tools.**

NCCA-4 Overview
Program Acronyms

- AHLTA – Armed Forces Health Longitudinal Tech Application
- DBSE – Defense Business Sourcing Environment
- DIMHRS – Defense Integrated Military Human Resources System
- DJC^2 – Deployable Joint Command and Control
- DONTFS – DON Total Force System
- GCCS-M – Global Command and Control System – Maritime
- GCSS-MC – Global Combat Support System – Marine Corps.
- Navy ERP –Navy Enterprise Resource Planning
- NCES – Net-Centric Enterprise System
- NECC – Net Enabled Command Capability
- NTCSS – Navy Tactical Command Support System
- OOMA – Optimized Operational Maintenance Activity (part of NTCSS)
- SPS – Standard Procurement System
- TC-AIMS – Transportation Coordinators' Automated Info for Movements System
- TMIP – Theater Medical Information Program

NCCA-4 Overview
Current and Recent Efforts

CCAs/SRs for MS/FRPD Reviews

Program	ACAT
DJC^2	IAM
GCCS-M	IAC
GCSS-MC	IAM
Navy ERP	IAM
OOMA (NTCSS)	IAC

Special Requests

DIMHRS/DONTFS Assessment
Fisher House Analysis
Navy ERP Acq Prog Baseline Review
Unified Exchange Task Force Review

CIPT Membership

Program	ACAT
AHLTA	IAM
DBSE	IAM
NCES	IAM
NECC	ID
SPS	IAM
TC-AIMS II	IAM
TMIP	IAM

Projects

AIS Factors
Joint IT Team Data Collection
SW Estimating Handbook Update

More Acronyms

- **BA – Benefits Analysis**
- **CARD – Cost Analysis Requirements Description**
- **CES – Cost Element Structure**
- **DON CAIG – DON Cost Analysis Improvement Group**
- **EA – Economic Analysis**
- **EADP – EA Development Plan**
- **FYDP – Future Years Defense Program**
- **ITAB – Information Technology Acquisition Board**
- **MDA – Milestone Decision Authority**
- **NPDM – Navy Program Decision Meeting**
- **OASD (NII) – Office of the Assistant Secretary of Defense (Networks and Information Integration)**
- **OSD (PA&E) – Office of the Secretary of Defense (Program, Analysis, & Evaluation)**
- **POE – Program Office Estimate**

Cost Process for MS/FRPD Reviews
Approach

Data Collection

EA (POE & BA)

POE*

EADP → **CARD**

NCCA Est*

Reconciliation of Estimates*

DON CAIG

DON CAIG Memo

NPDM MS/FRPD Review

Responsibility

| Program Office |
| NCCA |
| Combined |

NCCA Technical Review Boards

NCCA Documentation

ACAT IA Unique
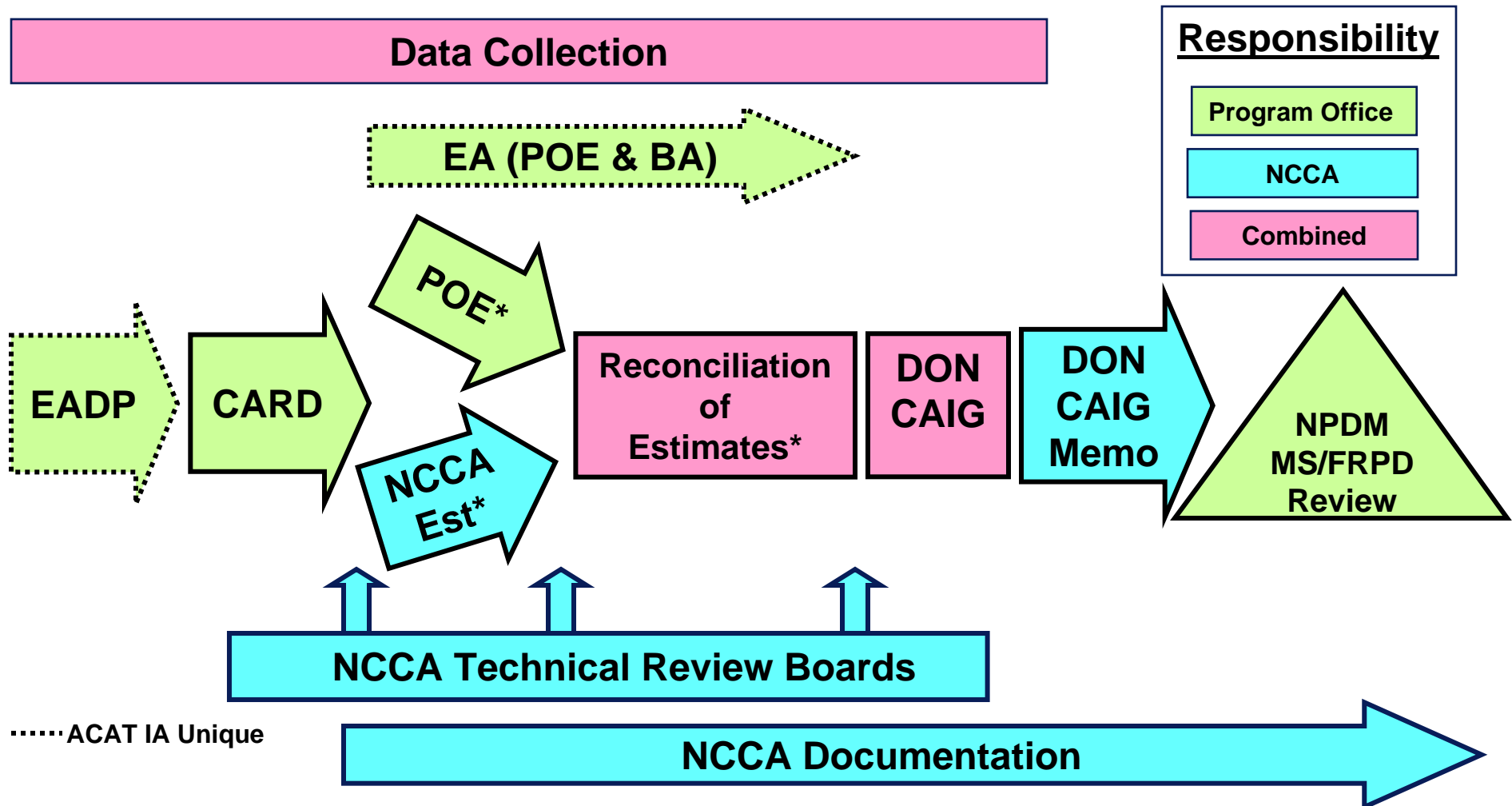
* Initial estimates at beginning of Reconciliation; estimates refined during reconciliation process.

Cost Process for MS/FRPD Reviews
Economic Analysis Development Plan (EADP)

- ## EADP (ACAT IA Only):

  – **Written, signed agreement among NCCA-4, Program Office, and other participants***

  – **Defines scope of analysis as well as ground rules & assumptions:**

    - Cost Element Structure (CES)
    - Economic Analysis (EA)
    - Full/Tailored CCA or SR
    - Risk Areas
    - Points of Contact
    - Schedule (submitted by NCCA-4)

Data Collection

EA (POE & BA)

EADP → CARD → POE / NCCA Est → Reconciliation of Estimates → DON CAIG → DON CAIG Memo → NPDM MS/FRPD Review

NCCA Technical Review Boards

NCCA Documentation
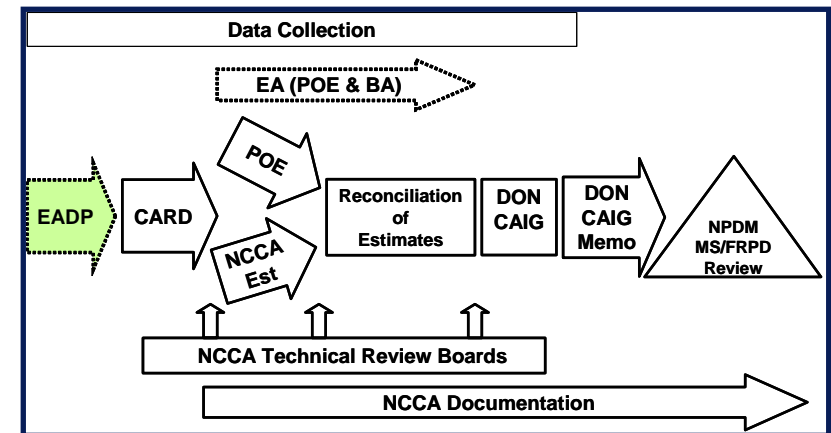
EADP is written, agreed upon Road-Ahead

* e.g., OSD (PA&E), MDA, Sponsor, DASN , etc.

Cost Process for MS/FRPD Reviews
Cost Analysis Requirements Description (CARD)

- **CARD:**

  - **Baseline for Program Office Estimate and CCA/ICE**
  - **Detailed technical and programmatic description**
  - **Typical elements include:**

1. **Sys Overview**
2. **Risk**
3. **Sys Operational Concept**
4. **Quantity Requirements**
5. **Sys Manpower Requirements**
6. **Sys Activity Rates**

7. **Sys MS Schedule**
8. **Acquisition Plan & Strategy**
9. **Sys Development Plan**
10. **Element Facilities Requirements**
11. **Contractor Cost Data Report Plan**
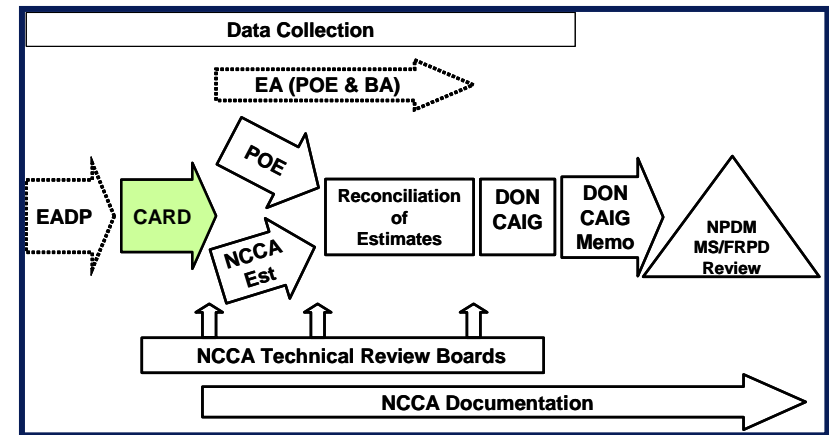
Cost Process for MS/FRPD Reviews
CARD (cont.)

- **CARD:**

  – **Recommend at least one draft (~60%) CARD**
  – **NCCA provides formal comments.**
  – **Final (90-95%) CARD receipt/acceptance by NCCA critical to MS or FRPD review schedule**
    - NCCA-4 Schedule requires 4 months between Final CARD acceptance and NCCA submission
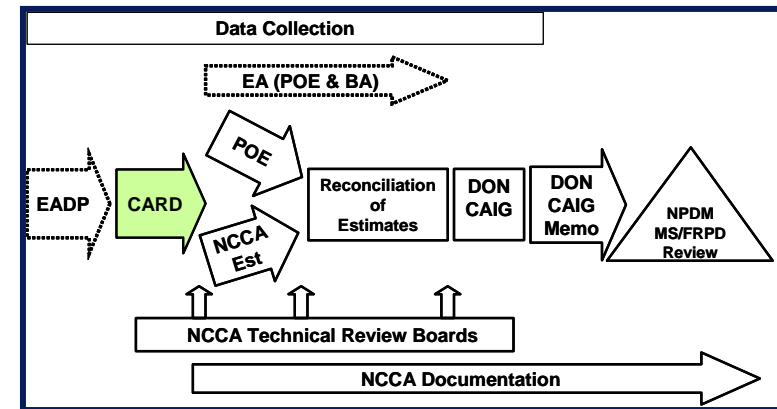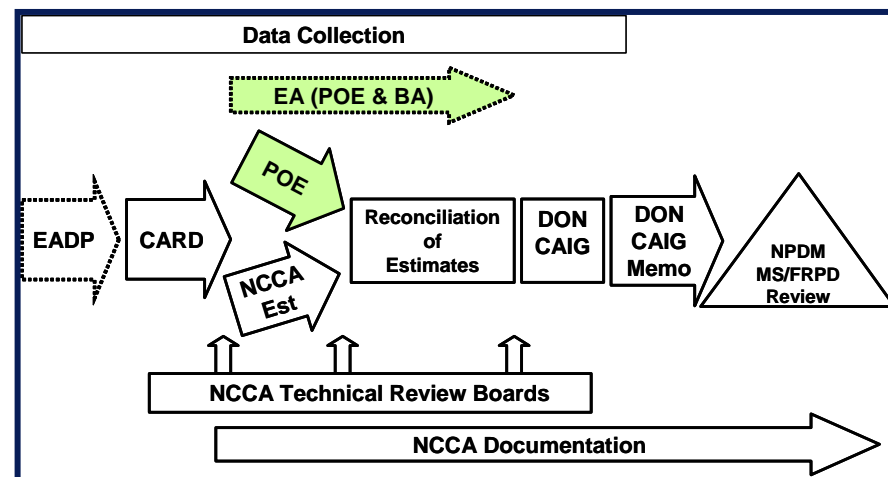

Day-for-Day slip if Final CARD is late or unacceptable

Cost Process for MS/FRPD Reviews
Economic Analysis (EA)

- ## EA includes

  - ### Program Office Estimate (POE)
    - Also called Program Life Cycle Cost Estimate

  - ### Benefits Analysis (BA) (ACAT IA Only)
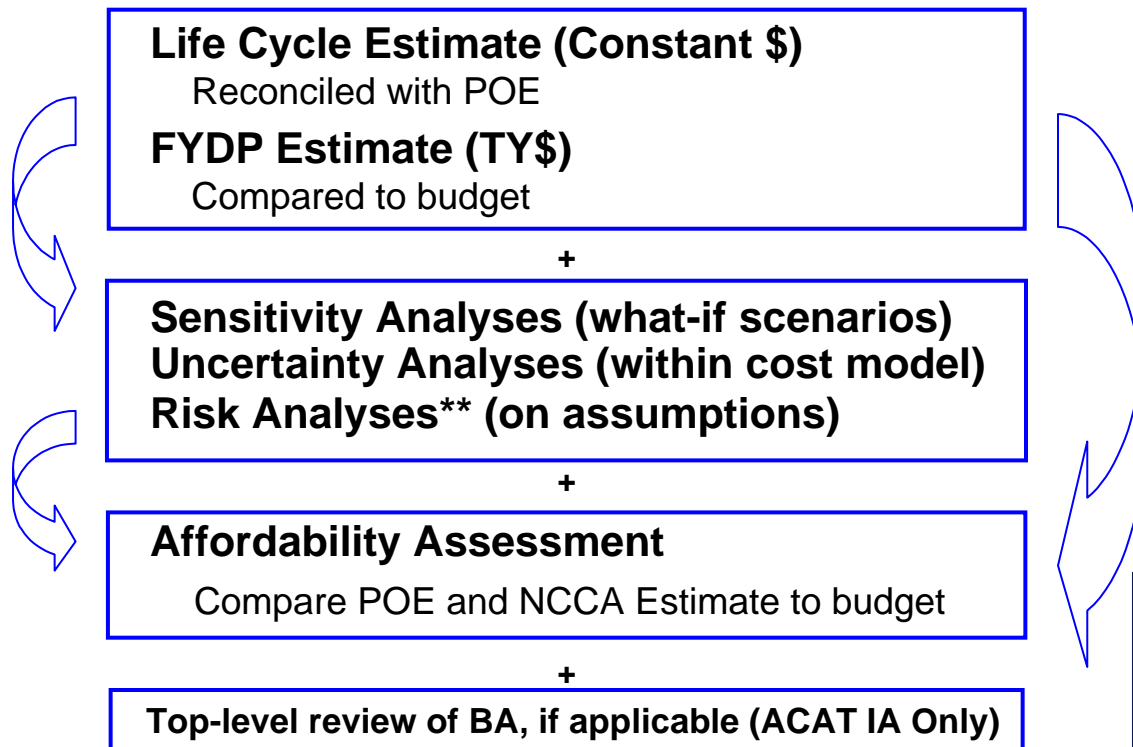   - Includes Return-On-Investment Calculations
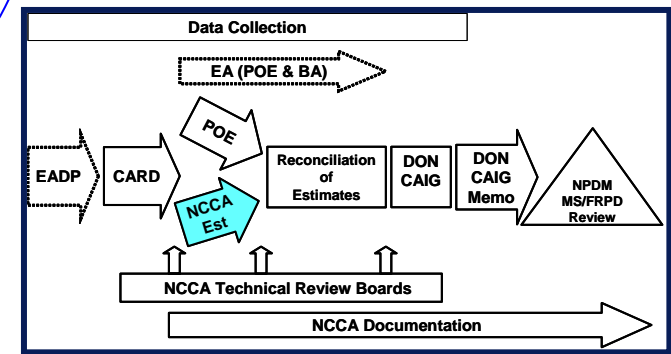
Cost Process for MS/FRPD Reviews
NCCA-4 CCA*/ICE

- **NCCA-4 CCA*/ICE includes:**

Life Cycle Estimate (Constant $)
Reconciled with POE

FYDP Estimate (TY$)
Compared to budget

+

Sensitivity Analyses (what-if scenarios)
Uncertainty Analyses (within cost model)
Risk Analyses (on assumptions)

+

Affordability Assessment

Compare POE and NCCA Estimate to budget

+

Top-level review of BA, if applicable (ACAT IA Only)

*   Can be SR
** Using Monte Carlo Simulation

Data Collection

EA (POE & BA)

EADP CARD POE NCCA Est Reconciliation of Estimates DON CAIG DON CAIG Memo NPDM MS/FRPD Review

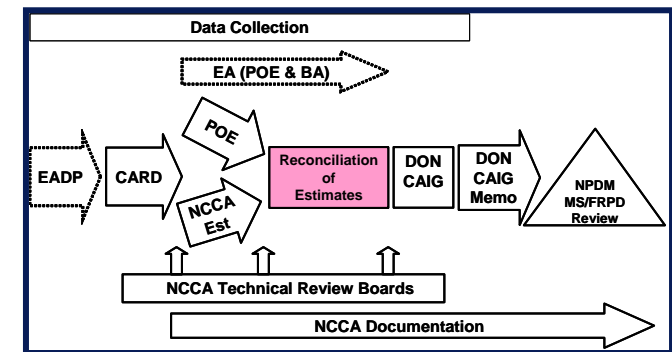NCCA Technical Review Boards

NCCA Documentation

Cost Process for MS/FRPD Reviews
Reconciliation

- **NCCA reviews POE for:**
  - **Completeness:** All cost elements addressed regardless of funding source
  - **Consistency with CARD**
  - **Accuracy of Calculations**
  - **Estimating Methodology**
    - Sound approach
    - Detailed and fully documented (source data provided)

- **NCCA and program office cost team compare costs and assumptions by element and make adjustments where needed (iterative process)**
- **Process does not result in a Service Cost Position**

Cost Process for MS/FRPD Reviews
## DON Cost Analysis Improvement Group (CAIG)

- **SECNAVINST 5420.196 establishes DON CAIG:**
  - Reviews life-cycle costs of ACAT IC, IAC, and IAM programs for which DON is responsible.
  - Convenes for SR at request of MDA.

- **DON CAIG meeting held to review results and methodologies of POE and CCA/ICE.**

  - NCCA Director (or rep) chairs meeting.
  - Invitees include PM/PEO, DASN, OPNAV, FMB, etc.
  - Attendance of non-government personnel pre-approved by Chair

- **Chair sends DON CAIG memo to MDA and other cognizant organizations at least 10 days* prior to MS or FRPD review**
  - For ACAT IAM programs, five days* before NPDM
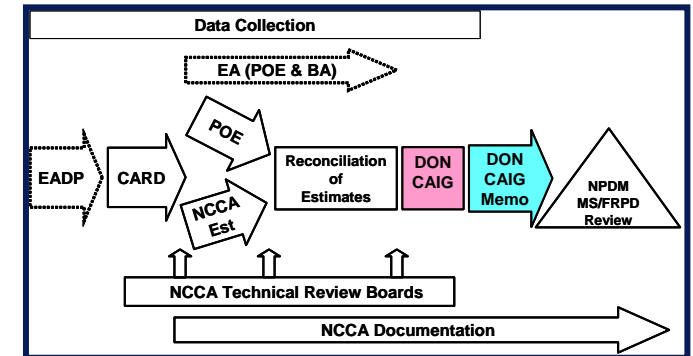
* Working Days

Cost Process for MS/FRPD Reviews
NCCA-4 Products

Data Request/ Collection

Formal EADP & CARD Comments

CCA/ICE

Presentations for NCCA, DON CAIG, etc.

Cover Memo w/ Supporting Documentation (DON CAIG Memo)

Final Detailed Documentation

TASKS	ACTION	# OF WORK DAYS
KICK-OFF MEETING (Technical Briefing, Roles/Responsibilities, Scope & Schedule)	CIPT	
KICK-OFF TECHNICAL REVIEW BOARD	NCCA/PMO	
SUBMIT DRAFT CARD & EADP	PMO	20
SUBMIT CARD COMMENTS & DATA REQUEST	NCCA	15
DATA COLLECTION	NCCA / PMO	15
SUBMIT FINAL CARD / DATA SUBMISSION / DRAFT LCCE TEMPLATE	PMO	20
FINAL CARD / DATA SUBMISSION ACCEPTANCE	NCCA	5
DEVELOP CCA	NCCA	30
INITIAL RECONCILIATION	NCCA/PMO	3
UPDATE LCCE/CCA	NCCA/PMO	3
FINAL RECONCILIATION	NCCA/PMO	3
SUBMIT FINAL EA/BUDGET	PMO	3
COMPLETE NCCA PRODUCTS & FINAL ANALYSES **	NCCA	18
PRESENT TO NCCA MANAGEMENT	NCCA	1
CONDUCT DON CAIG	NCCA	5
SUBMIT ASSESSMENT***	NCCA	15
NPDM, OIPT, ITAB, etc.		25
TOTAL		181

Note: Notional Schedule does not include holidays
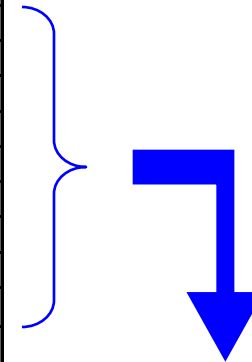
Approx. 4 Months From CARD Acceptance by NCCA to NCCA Submit

* NCCA-4 provides program-specific schedule for EADP
** Final CCA, briefings, draft DON CAIG memo, etc.
*** Usually a cover memo with supporting documentation

NCCA-4 Road Ahead

- **Continue Use of Contractor Support (PMO-funded)**
- **Conduct Further Research**
- **Enhance Databases**
- **Continue Special Projects**
- **Maintain Close Working Relationships with Customers**

Key: Establish communication at beginning of program MS process and maintain constant exchange throughout process